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University of California  
College of Agriculture  
Agricultural Experiment Station  
Berkeley, California

SEASONAL LABOR NEEDS FOR CALIFORNIA CROPS

YUBA COUNTY

Progress Report No. 58

by

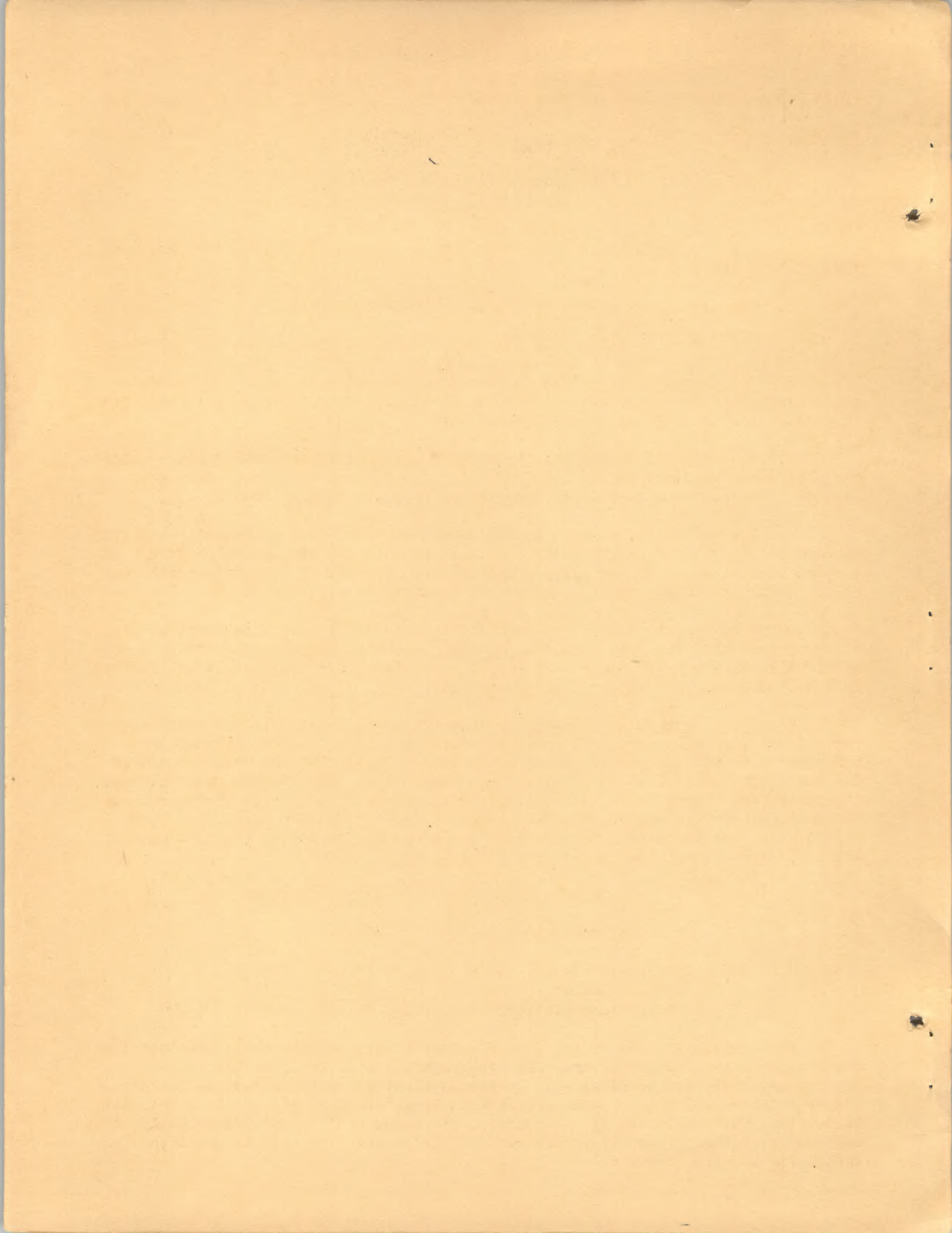
R. L. Adams

Preliminary -- Subject to Correction

January, 1937

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Progress Report No. 58

Seasonal Labor Needs for California Crops

Yuba County

Scope of Presentation.-- The following considerations govern the presentation of this progress report:

1. The data are confined to the area indicated above.
2. The data are confined solely to crops, livestock needs being ignored.
3. The findings apply only to occasional or seasonal labor requirements as distinguished from labor contributed by farm operators and by workers employed on a year-round or regular basis of employment.
4. Attention is concentrated upon workers required for hand tasks -- planting, thinning, weeding, hoeing, and harvesting -- without including teamsters, tractor drivers, irrigators, and shed packers of vegetables or fruits.
5. The presentation includes the so-called migratory, transient, or roving workers which comprise an important source of help needed in connection with certain tasks and at "peak" times which seasonally arise in connection with many field, truck, and fruit crops commercially produced in California.
6. This report is confined to California's need for seasonal agricultural workers because of the more pressing problems liable to arise in connection therewith. A later study is planned which will deal with other kinds of labor involved in the production of California's many crops.

Brief Description of the Area.-- Yuba County is located in the northeastern part of California, its eastern boundary which separates it from Sierra County being about 50 miles from the Nevada state line. It lies in the eastern part of the Sacramento Valley, about 40 miles from Sacramento. The Feather River divides it from Sutter County on the west, while Butte County bounds it on the north and Nevada County on the south. The county has an area of 404,480 acres, of which 98,435 acres are classified as available for crops by the United States Census of 1935. Further classification is as follows:

	<u>Acreage</u>
Crop land harvested	42,927
Crop failure	652
Crop land idle or fallow	17,856
Plowable pasture	37,000
Total land available for crops	98,435

The principal agricultural area composes a more or less continuous section contiguous to the Feather River. This area commences at the junction of the Feather and Bear rivers and extends northeast about 35 miles to include Brown's Valley on the north side of the Yuba River. It is about 10 miles wide. The area is devoted, quite extensively, to berries, deciduous fruits, and grapes while about one-fourth of the acreage is in irrigated field crops. The soil is not deep enough for alfalfa, however.



Seasonal Labor Needs for California Crops

Yuba County

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4. Attention is concentrated upon workers required for hand tasks -- planting, thinning, weeding, hoeing, and harvesting -- without including tractor drivers, irrigators, and other operators of vegetables or fruits.
5. The presentation includes the so-called migratory, transient, or roving workers which comprise an important source of help needed in connection with certain tasks and at "peak" times which seasonally arise in connection with many field, truck, and fruit crops seasonally produced in California.
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Brief Description of the Area. -- Yuba County is located in the northeastern part of California, its eastern boundary which separates it from Sierra County being about 50 miles from the Nevada state line. It lies in the eastern part of the Sacramento Valley, about 40 miles from Sacramento. The Feather River divides it from Butte County on the west, while Butte County bounds it on the north and Nevada County on the south. The county has an area of 404,430 acres, of which 98,455 acres are classified as available for crops by the United States Census of 1935. Further classification is as follows:

Acres

Crop land harvested	42,987
Crop fallows	552
Crop land idle or fallow	17,886
Plowable pasture	37,000
Total land available for crops	98,435

The principal agricultural area comprises a more or less continuous section contiguous to the Feather River. This area commences at the junction of the Feather and Bear rivers and extends northeast about 25 miles to include Brown's Valley on the north side of the Yuba River. It is about 10 miles wide. The area is devoted, quite extensively, to berries, deciduous fruits, and grapes with about one-fourth of the acreage in limited field crops. The soil is not deep enough for alfalfa, however.



Crops, Acreages, and Production.-- The basis used in calculating occasional or seasonal need for labor, other than that furnished by farm operators and regularly employed workers, appears as table 1.

TABLE 1

Basis for Calculating Seasonal Labor Requirements  
Yuba County

Crop	Acreage	Production
Field crops:*		
Alfalfa †	2,540	11,316 tons
Grain -- barley	10,698	224,826 bushels = 107,916 cwt.
oats	3,317	76,060 bushels = 24,340 cwt.
wheat	5,460	76,710 bushels = 46,026 cwt.
Grain sorghums †	302	5,381 bushels
Hay -- grain	3,154	4,718 tons
volunteer, etc.	1,829	2,487 tons
Hops †	546	3,609 bales of 190 pounds net †
Rice	1,763	61,810 bushels
Vetch seed †	100	--
Seed crops: † (beet, carrot, lettuce)	163	--
Vegetable crops: †		
Peas -- spring †	50	--
Tomatoes -- canning	260	2,080 tons
Fruit and nut crops: †		
Almonds	185.3	36 tons
Apples †	9.7	--
Apricots	63.0	250 tons fresh weight, dried †
Cherries -- Royal Ann	28.3)	(45 tons barrelled
other varieties	84.2)	(80 tons shipped east
Figs	266.1	150 tons (dry weight)
Filberts †	8.0	--
Nectarines	136.9	500 tons shipped (38 cars)
Olives	888.4	(421.5 tons for canning (195.5 tons not for canning**
Oranges †	5.3	--
Peaches -- Tuscan	112.0)	(20,150 tons canned
Phillips	809.7)	22,050 tons (1,900 tons (fresh
other varieties	1,736.2)	( weight) dried
freestone	81.7	290 tons (165 tons shipped (125 tons (fresh weight) dried)
Pears (mostly Bartlett)	848.8	6,600 tons (2,600 tons canned (1,300 tons dried (2,700 tons shipped east
Persimmons †	4.7	--
Plums †	22.0	35 tons (canning varieties)
Prunes (mostly French)	1,681.6	2,500 tons (dry weight)
Walnuts	315.0	143,100 pounds (118,800 pounds ( merchantable †† (24,300 pounds culls ( (estimated)
Grapes -- table and raisin †	99.6	
juice varieties	186.5	



or seasonal need for labor, other than that furnished by farm operators and partly employed workers, appears as table 1.

TABLE 1

Needs for Calculating Seasonal Labor Requirements  
Yuba County

Crop	Acres	Production
Field crops*		
Alfalfa †	2,840	11,316 tons
Grain -- barley	10,498	224,828 bushels = 307,918 cwt.
oats	2,317	76,080 bushels = 84,340 cwt.
wheat	2,440	76,710 bushels = 85,028 cwt.
Grain sorghums †	308	5,381 bushels
Hay -- grain	2,184	4,718 tons
volunteer, etc.	1,829	2,487 tons
Hops †	548	2,408 bales of 150 pounds net
Rice	1,783	81,810 bushels
Vegetables †	100	--
Seed crops: † (beet, carrot, lettuce)	163	--
Vegetable crops: †		
Peas -- spring †	80	--
Tomatoes -- canning	280	2,080 tons
Fruit and nut crops: †		
Almonds	182.2	36 tons
Apples †	9.7	--
Apricots	84.0	250 tons (fresh weight, dried)
Cherries -- Royal Ann	28.2	(48 tons packed)
other varieties	84.2	(60 tons shipped west)
Pears	288.1	180 tons (dry weight)
Peaches †	8.0	--
Nectarines	138.9	800 tons shipped (38 cwt.)
Olives	888.4	(421.8 tons for canning)
		(195.5 tons not for canning)
Oranges †	8.3	--
Peaches -- Tessa	118.0	(20,180 tons canned)
Philippa	808.7	22,080 tons (1,900 tons (fresh weight) dried)
other varieties	1,738.2	(weight) dried
Pineapples	81.7	280 tons (188 tons shipped)
		(122 tons (fresh weight) dried)
Pears (mostly Bartlett)	848.8	2,800 tons (2,800 tons canned)
		(1,300 tons dried)
		(2,700 tons shipped west)
Plums	4.7	25 tons (canning varieties)
Prunes (mostly French)	1,881.6	2,700 tons (dry weight)
Walnuts	225.0	342,100 pounds (118,800 pounds)
		(84,300 pounds culls)
		(estimated)
Oranges -- table and packing	89.8	
other varieties	184.8	



## Footnotes to table 1.

\* Acreage and production of field crops are from United States Census of 1935 with the exception of hops and vetch seed.

† Acreage or production of these crops is so small that use of seasonal labor is inconsequential and hence ignored.

‡ Data on hops are from Irving S. Marks, Sacramento.

§ The following drying ratios have been used in this report:

Hops	4 to 1
Apricots	5 to 1
Prunes	2.5 to 1

¶ Acreage of vegetable crops is from Federal State Crop Reporting Service for year 1935.

|| Acreage of fruit and nut crops is from H. A. Crane, Agricultural Commissioner, Yuba County, and includes bearing acreage only.

\*\* Olive production estimated by California Olive Association.

†† Walnut production is for 1935 crop, as reported by Walnut Control Board.

Operations Requiring Seasonal Labor and Time of Need.-- Farm operations requiring the use of seasonal or occasional labor for the various crops raised in Yuba County are indicated in table 2. This tabulation does not include the employing of shed workers needed to wash, pack, and prepare various commodities for shipping and marketing.

TABLE 2

Operations Requiring Use of Seasonal Labor and Times of Needs by Crops  
Yuba County

Crop	Operation	Time of need	Per cent of work done by seasonal help	Output per mah-day
Field crops: Grain	Threshing -- with combine	June 1-30 -- 50 per cent of acreage	80	5 acres
		July 1-31 -- 50 per cent of acreage		
Hay, other than alfalfa	Mowing	May 1-31 -- all of job	50	8 acres
	Raking	May 1-31 -- all of job	50	16 acres
	Shocking	May 1-31 -- all of job	50	30 acres
Hops	Pruning, stringing, etc.	March 1-31 -- 50 per cent of job	100	Total of 6 man-days per acre
		April 1-30 -- 50 per cent of job		

Table continued on next page.



\* Average and production of field crops are from United States Census of 1935 with the exception of hops and wheat seeds.

† Average or production of these crops is so small that use of seasonal labor is immaterial and hence ignored.

‡ Data on hops are from Irving S. Marks, Sacramento.

§ The following ratios have been used in this report:

Hops	4 to 1
Apples	5 to 1
Prunes	2.5 to 1

¶ Average of vegetable crops is from Federal State Crop Reporting Service for year 1935.

|| Average of fruit and nut crops is from H. A. Crane, Agricultural Commissioner, Yuba County, and includes bearing orchards only.

\*\* Olive production estimated by California Olive Association.

†† Walnut production is for 1935 crop, as reported by Walnut Control Board.

Operations Requiring Seasonal Labor and Time of Need. -- For operations requiring the use of seasonal or occasional labor for the various crops listed in Yuba County are indicated in Table 2. This tabulation does not include the applying of seed wetters needed to wash, peel, and prepare various commodities for shipping and marketing.

TABLE 2

Operations Requiring Use of Seasonal Labor and Time of Need by Crop  
Yuba County

Crop	Operation	Time of need	Per cent of work done by seasonal help	Quota per man-day
Field crops: Grain	Threshing -- with combine	June 1-30 -- 50 per cent of average	50	200
		July 1-31 -- 50 per cent of average		
Hay, other than alfalfa	Haying	May 1-31 -- all of job	50	8 acres
	Shedding	May 1-31 -- all of job	50	15 acres
	Shocking	May 1-31 -- all of job	50	20 acres
Hops	Pruning, stringing, etc.	March 1-31 -- 50 per cent of job	100	Total of 1 man-day per acre
		April 1-30 -- 50 per cent of job		

Table continued on next page.



Table 2 continued.

Crop	Operation	Time of need	Per cent of work done by seasonal help	Output per man-day
Field crops: Hops (cont.)	Training	May 7-31 -- 2/3 of job June 1-15 -- 1/3 of job	100	Total of 6 man-days per acre 200 pounds green weight 4,000 pounds green weight 15 bales of 190 pounds dry weight
	Picking	August 10-31 -- 2/3 of crop September 1-10 -- 1/3 of crop	100	
	Drying	August 10-31 -- 2/3 of crop September 1-10 -- 1/3 of crop	75	
	Baling	September 10-30 -- all of crop	60	
Rice	Push heading and swathing	September 15-30 -- 25 per cent of acreage	50	13 acres
		October 1-31 -- 75 per cent of acreage		
	Threshing -- with pick-up combine	September 23-30 -- 15 per cent of acreage	50	125 cwt. (or 3 acres)
		October 1-31 -- 70 per cent of acreage November 1-7 -- 15 per cent of acreage		
Vegetable crops: Tomatoes -- canning	Picking	August 15-31 -- 20 per cent of crop September 1-30 -- 40 per cent of crop October 1-31 -- 40 per cent of crop	100	2,000 pounds
Fruit and nut crops: Almonds	Knocking	August 1-31 -- 30 per cent of crop	100	150 pounds
		September 1-30 -- 70 per cent of crop		
	Hulling	August 1-31 -- 30 per cent of crop	50	400 pounds
		September 1-30 -- 70 per cent of crop		
Apricots	Picking	June 5-30 -- 80 per cent of crop	100	1,200 pounds
		July 1-5 -- 20 per cent of crop		
	Cutting for drying	June 5-30 -- 80 per cent of job	100	1,000 pounds
		July 1-10 -- 20 per cent of job		

Table continued on next page.



Table 2 continued.

Crop	Operation	Time of need	Per cent of work done by seasonal help	Output per man-day
Field crops Hops (cont.)	Training	May 7-31 -- 2/3 of job June 1-18 -- 1/3 of job	100	Total of 8 man-days per acre
	Picking	August 10-31 -- 2/3 of crop September 1-10 -- 1/3 of crop	100	800 pounds green weight
	Drying	August 10-31 -- 2/3 of crop September 1-10 -- 1/3 of crop	75	4,000 pounds green weight
	Baling	September 10-30 -- all of crop	60	15 bales of 150 pounds dry weight
Rice	Push heading and weeding	September 15-30 -- 15 per cent of average	50	15 acres
	Threshing -- with pick-up combine	October 1-31 -- 75 per cent of average September 25-30 -- 15 per cent of average	50	155 cwt. (or 3 acres)
		November 1-7 -- 15 per cent of average		
Vegetable crops -- Tomatoes -- canning	Picking	August 15-31 -- 30 per cent of crop September 1-30 -- 40 per cent of crop October 1-31 -- 40 per cent of crop	100	2,000 pounds
Fruit and nut crops: Almonds	Knocking	August 1-31 -- 30 per cent of crop September 1-30 -- 70 per cent of crop	100	150 pounds
	Shelling	August 1-31 -- 30 per cent of crop September 1-30 -- 70 per cent of crop	50	400 pounds
	Picking	June 25-30 -- 50 per cent of crop July 1-8 -- 30 per cent of crop	100	1,200 pounds
	Culling for drying	June 25-30 -- 50 per cent of job July 1-10 -- 50 per cent of job	100	1,000 pounds

Table continued on next page.



Table 2 continued.

Crop	Operation	Time of need	Per cent of work done by seasonal help	Output per man-day
Fruit and nut crops (cont.): Apricots (cont.)	Other dry yard labor	June 5-30 -- 75 per cent of job	100	11 hours per fresh ton*
		July 1-10 -- 25 per cent of job		
Cherries	Picking for shipping	May 1-31 -- 75 per cent of job	100	100 pounds
		June 1-10 -- 25 per cent of job		
	Picking for barrelling	May 15-31 -- 60 per cent of job	100	200 pounds
		June 1-10 -- 40 per cent of job		
Figs -- Adriatic	Picking up	September 1-30 -- 80 per cent of crop	100	600 pounds dry weight
		October 1-7 -- 20 per cent of crop		
	Dipping, sulfuring, and other dry yard labor	September 1-30 -- 80 per cent of job	50	33 hours per dry ton
		October 1-7 -- 20 per cent of job		
	Sorting	September 13-30 -- 50 per cent of job	100	975 pounds in 8 hours
		October 1-19 -- 50 per cent of job		
Nectarines	Pruning	November -- 25 per cent of acreage	80	0.25 acre
		December -- 25 per cent of acreage		
		January -- 25 per cent of acreage		
		February -- 25 per cent of acreage		
	Thinning	May 1-31 -- all of acreage	100	0.17 acre
	Picking	July 1-20 -- all of crop	100	1,000 pounds
Olives	Picking for pickling	October 1-31 -- 50 per cent of job	90	200 pounds
		November 1-30 -- 50 per cent of job		
	Picking for oil, etc.	December -- 1/3 of job	90	400 pounds
		January -- 1/3 of job February -- 1/3 of job		

Table continued on next page.



Year	Month	Day	Event	Notes
1900	Jan	1	...	...
1900	Jan	2	...	...
1900	Jan	3	...	...
1900	Jan	4	...	...
1900	Jan	5	...	...
1900	Jan	6	...	...
1900	Jan	7	...	...
1900	Jan	8	...	...
1900	Jan	9	...	...
1900	Jan	10	...	...
1900	Jan	11	...	...
1900	Jan	12	...	...
1900	Jan	13	...	...
1900	Jan	14	...	...
1900	Jan	15	...	...
1900	Jan	16	...	...
1900	Jan	17	...	...
1900	Jan	18	...	...
1900	Jan	19	...	...
1900	Jan	20	...	...
1900	Jan	21	...	...
1900	Jan	22	...	...
1900	Jan	23	...	...
1900	Jan	24	...	...
1900	Jan	25	...	...
1900	Jan	26	...	...
1900	Jan	27	...	...
1900	Jan	28	...	...
1900	Jan	29	...	...
1900	Jan	30	...	...
1900	Jan	31	...	...



Table 2 continued.

Crop	Operation	Time of need	Per cent of work done by seasonal help	Output per man-day
Fruit and nut crops (cont.): Peaches -- freestone and clingstone	Pruning	November -- 25 per cent of acreage	80	0.25 acre
		December -- 25 per cent of acreage		
		January -- 25 per cent of acreage		
		February -- 25 per cent of acreage		
	Brush burning	November -- 25 per cent of acreage	50	2.5 acres
		December -- 25 per cent of acreage		
		January -- 25 per cent of acreage		
		February -- 25 per cent of acreage		
	Spraying	November -- 50 per cent of acreage	75	1.25 acres
		December -- 50 per cent of acreage		
		February -- 50 per cent of acreage		
		March -- 50 per cent of acreage		
		May 1-31 -- all of acreage		
	Thinning	April 25-30 -- 5 per cent of acreage	100	0.17 acre
		May 1-31 -- 85 per cent of acreage		
		June 1-30 -- 10 per cent of acreage		
		July 15-31 -- 1 per cent of crop		
	Picking and grading -- clingstone varieties	August 1-31 -- 62 per cent of crop	100	2,000 pounds
		September 1-15 -- 37 per cent of crop		
		July 20-31 -- 25 per cent of crop		
	Picking -- freestone varieties	August 1-31 -- 75 per cent of crop	100	2,000 pounds
		August 1-31 -- 70 per cent of job		
	Cutting for drying -- clingstone varieties	September 1-15 -- 30 per cent of job	100	1,000 pounds
		July 20-31 -- 25 per cent of job		
	Cutting for drying -- freestone varieties	August 1-31 -- 75 per cent of job	100	1,500 pounds

Table continued, on next page.



Date	Time	Description	Amount	Balance
1890 Jan 1		To Balance forward	100.00	100.00
1890 Jan 5		By Cash	25.00	125.00
1890 Jan 10		To Cash	50.00	175.00
1890 Jan 15		By Cash	75.00	250.00
1890 Jan 20		To Cash	100.00	350.00
1890 Jan 25		By Cash	125.00	475.00
1890 Jan 30		To Cash	150.00	625.00



Table 2 continued.

Crop	Operation	Time of need	Per cent of work done by seasonal help	Output per man-day
Fruit and nut crops (cont.): Peaches (cont.)	Other dry yard labor -- clingstone and freestone	July 20-31 -- 1 per cent of job	100	11.5 hours per fresh ton*
		August 1-31 -- 59 per cent of job		
		September 1-20 -- 40 per cent of job		
Pears	Pruning	November -- 25 per cent of acreage	100	0.1 acre
		December -- 25 per cent of acreage		
		January -- 25 per cent of acreage		
		February -- 25 per cent of acreage		
	Brush burning	November -- 25 per cent of acreage	50	2.5 acres
		December -- 25 per cent of acreage		
		January -- 25 per cent of acreage		
		February -- 25 per cent of acreage		
	Picking	July 1-31 -- 50 per cent of crop	100	1,500 pounds
		August 1-25 -- 50 per cent of crop		
	Cutting for drying	July 10-31 -- 40 per cent of job	100	1,000 pounds
		August 1-31 -- 60 per cent of job		
	Other dry yard labor	July 10-31 -- 30 per cent of job	100	26.5 hours per fresh ton*
		August 1-31 -- 60 per cent of job		
		September 1-15 -- 10 per cent of job		
Prunes	Pruning -- 25 per cent of acreage	November -- 25 per cent of acreage	100	0.5 acre
		December -- 25 per cent of acreage		
		January -- 25 per cent of acreage		
		February -- 25 per cent of acreage		

Table continued on next page.



Date	No. of days	Description of work	Amount	Total
1900-1-1	1	To the ... .. ... .. ... .. ... .. ... ..	100.00	100.00
1900-1-2	1	To the ... .. ... .. ... .. ... .. ... ..	100.00	200.00
1900-1-3	1	To the ... .. ... .. ... .. ... .. ... ..	100.00	300.00
1900-1-4	1	To the ... .. ... .. ... .. ... .. ... ..	100.00	400.00
1900-1-5	1	To the ... .. ... .. ... .. ... .. ... ..	100.00	500.00



Table 2 continued.

Crop	Operation	Time of need	Per cent of work done by seasonal help	Output per man-day
Fruit and nut crops (cont.): Prunes (cont.)	Brush burning	November -- 25 per cent of acreage	50	2.5 acres
		December -- 25 per cent of acreage		
		January -- 25 per cent of acreage		
		February -- 25 per cent of acreage		
	Picking up	August 1-31 -- 25 per cent of crop	100	1 ton
		September 1-30 -- 75 per cent of crop		
	Dipping and drying by dehydrator -- 60 per cent of crop	August 1-31 -- 25 per cent of job	80	6 man-hours per fresh ton <sup>†</sup>
		September 1-30 -- 75 per cent of job		
	Dipping and drying by sun -- 40 per cent of crop	August 1-31 -- 20 per cent of job	80	8.3 man-hours per fresh ton*
		September 1-30 -- 80 per cent of job		
Walnuts	Knocking and picking up	September 24-30 -- 15 per cent of crop	100	200 pounds
		October 1-31 -- 75 per cent of crop		
		November 1-15 -- 10 per cent of crop		

\* From Christie, A. W. and L. C. Barnard. The principles and practice of sun-drying fruit. California Agr. Exp. Sta. Bul. 388:40-60. 1925.

† From Christie, A. W. revised by P. F. Nichols. The dehydration of prunes. California Agr. Exp. Sta. Bul. 404:7. 1929.

Findings of Seasonal Labor Needs.-- Details and summaries of seasonal labor requirements of Yuba County agriculture are presented as table 3. The "size of task" are figures drawn from table 1, in terms of either acreage or output in tons, crates, boxes, or whatever unit is commonly used. The "output per man-day" is an average figure for the entire acreage or output figured in crates, hampers, boxes, or other units as indicated in the table. If the work is of a nature that requires a crew different members of which perform different tasks, then the average shown is per man based on the entire crew. Length of day is 9 hours, November to February; 10 hours, March to October, unless otherwise stated. Wide variations in output occur between farm and farm, field and field, and season and season, because of differences in soil types, climatic conditions, weeds, yields, and other factors influencing the amount of work that a laborer can perform in a given day. Moreover, the basis of output is a mature, experienced male worker without reference to use



No.	Date	Description	Amount	Total
1	Jan 1	Balance forward	100.00	100.00
2	Jan 5	Cash on hand	50.00	150.00
3	Jan 10	Cash on hand	25.00	175.00
4	Jan 15	Cash on hand	15.00	190.00
5	Jan 20	Cash on hand	10.00	200.00
6	Jan 25	Cash on hand	5.00	205.00
7	Jan 30	Cash on hand	5.00	210.00
8	Jan 31	Cash on hand	5.00	215.00

Balance forward 100.00  
Total 215.00

...



of women, children, and more or less inexperienced help that is sometimes used in connection with certain of the tasks requiring use of seasonal workers. The column headed "available days" reflects (a) limitations set from the period within which the work must be performed because of the nature of the task, such as transplanting, thinning, weeding, and cutting, and (b) available days as determined by weather conditions, inclement weather reducing the number of days when a required task can be performed. The "required number of individuals" is given in terms of workers as noted above in connection with "output per man-day."

It is probable that the estimated number of workers required, as recorded in table 3, will often be too low, for the reason that "peaks" frequently occur, during which an unusually large proportion of the job is done in a very short period. This would naturally require a much greater number of workers than when the work is spread over a longer period, even though the total amount of labor (in man-days) remains the same.





TABLE 3

## Seasonal Labor Needs -- Yuba County -- by Months and Tasks

Month	Crop and task	Size of task	Output per man-day	Required man-days	Available days	Required number of workers*
January	Nectarines: Pruning	27 acres †	0.25 acre	108	18	6
	Olives: Picking for oil, etc.	59 tons †	0.2 ton	295	18	17
	Peaches (clingstone and freestone):					
	Pruning	548 acres †	0.25 acre	2,192	18	122
	Brush burning	342 acres †	2.5 acres	137	18	8
	Pears: Pruning	212 acres	0.1 acre	2,120	18	118
	Brush burning	106 acres †	2.5 acres	43	18	3
	Prunes: Pruning	105 acres	0.5 acre	210	18	12
	Brush burning	52 acres †	2.5 acres	21	18	2
	Totals			5,126	18	285 man-months †
February	Nectarines: Pruning	27 acres †	0.25 acre	108	19	6
	Olives: Picking for oil, etc.	58 tons †	0.2 ton	290	19	16
	Peaches (clingstone and freestone):					
	Pruning	548 acres †	0.25 acre	2,192	19	116
	Brush burning	342 acres †	2.5 acres	137	19	8
	Spraying	1,028 acres †	1.25 acres	823	19	44
	Pears: Pruning	212 acres	0.1 acre	2,120	19	112
	Brush burning	106 acres †	2.5 acres	43	19	3
	Prunes: Pruning	105 acres	0.5 acre	210	19	12
	Brush burning	52 acres †	2.5 acres	21	19	2
March	Totals			5,944	19	313 man-months
	Hops: Pruning, stringing, etc.	546 acres	6	1,638	21	78
	Peaches: Spraying	1,027 acres †	1.25 acres	822	21	40
	Totals			2,460	21	118 man-months
April	Hops: Pruning, stringing, etc.	546 acres	6	1,638	22	75
	Peaches (all): Thinning	137 acres	0.17 acre	806	4	202 (Apr. 25-30)
	Totals			2,444	22	112 man-months
May	Hay (other than alfalfa): Mowing	2,492 acres †	8.0 acres	312	24	13
	Raking	2,492 acres †	16.0 acres	156	24	7
	Shocking	2,492 acres †	30.0 acres	84	24	4

Table continued on next page.



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690
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Table 3 continued.

Month	Crop and task	Size of task	Output per man-day	Required man-days	Available days	Required number of workers*
May (contd.)	Hops: Training	546 acres	4	2,184	19	115 (May 7-31)
	Cherries: Picking for shipping	120,000 pounds	100 pounds	1,200	24	50
	Picking for barrelling	54,000 pounds	200 pounds	270	12	23 (May 15-31)
	Nectarines: Thinning	140 acres	0.17 acre	824	24	35
	Peaches (all): Spraying	2,055 acres†	1.25 acres	1,644	24	69
	Thinning	2,329 acres	0.17 acre	13,700	24	571
	Totals			20,374	24	849 man-months
June	Grain (barley, wheat, oats): Threshing (with combine)	7,790 acres†	5.0 acres	1,558	25	63
	Hops: Training	546 acres	4	1,092	12	93 (June 1-15)
	Apricots: Picking	200 tons	0.6 ton	334	21	16 (June 5-30)
	Cutting for drying	200 tons	0.5 ton	400	21	19 (June 5-30)
	Other dry yard labor	188 tons ¶	//	207	21	10 (June 5-30)
	Cherries: Picking for shipping	40,000 pounds	100 pounds	400	8	50 (June 1-10)
	Picking for barrelling	36,000 pounds	200 pounds	180	8	23 (June 1-10)
	Peaches: Thinning	214 acres	0.17 acre	1,259	25	51
	Totals			5,429	25	218 man-months
July	Grain (barley, oats, wheat): Threshing (with combine)	7,790 acres†	5.0 acres	1,558	26	60
	Apricots: Picking	50 tons	0.6 ton	83	4	21 (July 1-5)
	Cutting for drying	50 tons	0.5 ton	100	4	25 (July 1-5)
	Other dry yard labor	62 tons ¶	//	69	8	9 (July 1-10)
	Nectarines: Picking	500 tons	0.5 ton	1,000	17	59 (July 1-20)
	Peaches (clingstone varieties): Picking and grading	220 tons	1.0 ton	220	13	17 (July 15-31)
	(freestone varieties): Picking	73 tons	1.0 ton	73	8	10 (July 20-31)
	Cutting for drying	31 tons	0.75 ton	42	8	6 (July 20-31)
	Other dry yard labor	20 tons ¶	//	23	8	3 (July 20-31)
	Pears: Picking	3,300 tons	0.75 ton	4,400	26	170
	Cutting for drying	520 tons	0.5 ton	1,040	18	58 (July 10-31)
	Other dry yard labor	390 tons ¶	//	1,034	18	58 (July 10-31)
	Totals			9,642	26	371 man-months

Table continued on next page.





Table 3 continued.

Month	Crop and task	Size of task	Output per man-day	Required man-days	Available days	Required number of workers*
August	Hops: Picking	1,828,560 pounds	200 pounds	9,143	18	508 (Aug. 10-31)
	Drying	1,371,420 pounds†	4,000 pounds	343	18	20 (Aug. 10-31)
	Tomatoes (canning): Picking	416 tons	1.0 ton	416	13	32 (Aug. 15-31)
	Almonds: Knocking	21,600 pounds	150 pounds	144	26	6
	Hulling	10,800 pounds†	400 pounds	27	26	2
	Peaches clingstone : Picking and grading	13,671 tons	1.0 ton	13,671	26	526
	freestone : Picking	217 tons	1.0 ton	217	26	9
	clingstone : Cutting for drying	1,330 tons	0.5 ton	2,660	26	103
	freestone : Cutting for drying	94 tons	0.75 ton	126	26	5
	clingstone and freestone : Other dry yard labor	1,195 tons ¶	#	1,375	26	53
	Pears: Picking	3,300 tons	0.75 ton	4,400	22	200 (Aug. 1-25)
	Cutting for drying	780 tons	0.5 ton	1,560	26	60
	Other dry yard labor	780 tons ¶	#	2,067	26	80
	Prunes: Picking up	1,313 tons	1.0 ton	1,313	26	51
	Dipping and drying by dehydrator	630 tons † ¶	#	378	26	15
	Dipping and drying by sun	420 tons † ¶	#	349	26	14
	Totals			38,189	26	1,500 man-months
September	Hops: Picking	914,280 pounds	200 pounds	4,572	9	508 (Sept. 1-10)
	Drying	685,710 pounds†	4,000 pounds	172	9	20 (Sept. 1-10)
	Baling	2,165 bales	15 bales	145	17	9 (Sept. 10-30)
	Rice: Push heading and swathing	220 acres †	13 acres	17	13	2 (Sept. 15-30)
	Threshing (with pick up combine)	132 acres †	3 acres	44	6	8 (Sept. 23-30)
	Tomatoes (canning): Picking	832 tons	1.0 ton	832	26	32
	Almonds: Knocking	50,400 pounds	150 pounds	337	26	13
	Hulling	25,200 pounds †	400 pounds	63	26	3
	Figs: Picking up	120 tons	0.3 ton	400	26	16
	Dipping, sulfuring, and other dry yard labor	60 tons †	#	198	26	8
	Sorting	150,000 pounds	975 pounds**	154	15	11 (Sept. 17-30)

Table continued on next page.





Table 3 continued.

Month	Crop and task	Size of task	Output per man-day	Required man-days	Available days	Required number of workers*
September (contd.)	Peaches (clingstone): Picking and grading	1,544 tons	1.0 ton	1,544	13	119 (Sept. 1-15)
	Cutting for drying (clingstone and freestone):	570 tons	0.5 ton	1,140	13	88 (Sept. 1-15)
	Other dry yard labor	810 tons #	#	932	17	55 (Sept. 1-20)
	Pears: Other dry yard labor	130 tons #	#	345	13	27 (Sept. 1-15)
	Prunes: Picking up	3,937 tons	1.0 ton	3,937	26	152
	Dipping and drying by dehydrator	1,890 tons #†	#	1,134	26	44
	Dipping and drying by sun	1,680 tons #†	#	1,395	26	54
	Walnuts: Knocking and picking up	21,465 pounds	200 pounds	108	5	22 (Sept. 24-30)
	Totals			17,469	26	672 man-months
October	Rice: Push heading and swathing	661 acres †	13 acres	51	24	3
	Threshing with pick up combine	617 acres †	3 acres	206	24	9
	Tomatoes (canning): Picking	832 tons	1.0 ton	832	24	35
	Figs: Picking up	30 tons	0.3 ton	100	5	20 (Oct. 1-7)
	Dipping, sulfuring, and other dry yard labor	15 tons †	#	50	5	10 (Oct. 1-7)
	Sorting	150,000 pounds	975 pounds**	154	16	10 (Oct. 1-19)
	Olives: Picking for pickling	190 tons †	0.1 ton	1,900	24	80
	Walnuts: Knocking and picking up	107,325 pounds	200 pounds	537	24	23
	Totals			3,830	24	160 man-months
November	Rice: Threshing with pick up combine	132 acres †	3.0 acres	44	5	9 (Nov. 1-7)
	Nectarines: Pruning	28 acres †	0.25 acre	112	23	5
	Olives: Picking for pickling	189 tons †	0.1 ton	1,890	23	83
	Peaches (clingstone and freestone): Pruning	548 acres †	0.25 acre	2,192	23	96
	Brush burning	343 acres †	2.5 acres	138	23	6
	Spraying	1,028 acres †	1.25 acres	823	23	36
	Pears: Pruning	213 acres	0.1 acre	2,130	23	93
	Brush burning	106 acres †	2.5 acres	43	23	2
	Prunes: Pruning	105 acres	0.5 acre	210	23	10
	Brush burning	53 acres †	2.5 acres	22	23	1
	Walnuts: Knocking and picking up	14,310 pounds	200 pounds	72	11	7 (Nov. 1-15)
	Totals			7,676	23	334 man-months

Table continued on next page.



No.	Description	1900		1901		Total
		Amount	Per Cent	Amount	Per Cent	
1	General Fund	100,000.00	100.00	100,000.00	100.00	200,000.00
2	State Treasury	50,000.00	50.00	50,000.00	50.00	100,000.00
3	State Bank	25,000.00	25.00	25,000.00	25.00	50,000.00
4	State Insurance	10,000.00	10.00	10,000.00	10.00	20,000.00
5	State Printing	5,000.00	5.00	5,000.00	5.00	10,000.00
6	State Postage	2,500.00	2.50	2,500.00	2.50	5,000.00
7	State Telegraph	1,250.00	1.25	1,250.00	1.25	2,500.00
8	State Telephone	625.00	.625	625.00	.625	1,250.00
9	State Fuel	312.50	.3125	312.50	.3125	625.00
10	State Light	156.25	.15625	156.25	.15625	312.50
11	State Water	78.125	.078125	78.125	.078125	156.25
12	State Gas	39.0625	.0390625	39.0625	.0390625	78.125
13	State Electricity	19.53125	.01953125	19.53125	.01953125	39.0625
14	State Steam	9.765625	.009765625	9.765625	.009765625	19.53125
15	State Coal	4.8828125	.0048828125	4.8828125	.0048828125	9.765625
16	State Oil	2.44140625	.00244140625	2.44140625	.00244140625	4.8828125
17	State Lumber	1.220703125	.001220703125	1.220703125	.001220703125	2.44140625
18	State Brick	.6103515625	.0006103515625	.6103515625	.0006103515625	1.220703125
19	State Stone	.30517578125	.00030517578125	.30517578125	.00030517578125	.6103515625
20	State Cement	.152587890625	.000152587890625	.152587890625	.000152587890625	.30517578125
21	State Iron	.0762939453125	.0000762939453125	.0762939453125	.0000762939453125	.152587890625
22	State Steel	.03814697265625	.00003814697265625	.03814697265625	.00003814697265625	.0762939453125
23	State Copper	.019073486328125	.000019073486328125	.019073486328125	.000019073486328125	.03814697265625
24	State Zinc	.0095367431640625	.0000095367431640625	.0095367431640625	.0000095367431640625	.019073486328125
25	State Lead	.00476837158203125	.00000476837158203125	.00476837158203125	.00000476837158203125	.0095367431640625
26	State Tin	.002384185791015625	.000002384185791015625	.002384185791015625	.000002384185791015625	.00476837158203125
27	State Silver	.0011920928955078125	.0000011920928955078125	.0011920928955078125	.0000011920928955078125	.002384185791015625
28	State Gold	.00059604644775390625	.00000059604644775390625	.00059604644775390625	.00000059604644775390625	.0011920928955078125
29	State Platinum	.000298023223876953125	.000000298023223876953125	.000298023223876953125	.000000298023223876953125	.00059604644775390625
30	State Palladium	.0001490116119384765625	.0000001490116119384765625	.0001490116119384765625	.0000001490116119384765625	.000298023223876953125
31	State Iridium	.00007450580596923828125	.00000007450580596923828125	.00007450580596923828125	.00000007450580596923828125	.0001490116119384765625
32	State Rhodium	.000037252902984619140625	.000000037252902984619140625	.000037252902984619140625	.000000037252902984619140625	.00007450580596923828125
33	State Ruthenium	.0000186264514923095703125	.0000000186264514923095703125	.0000186264514923095703125	.0000000186264514923095703125	.000037252902984619140625
34	State Selenium	.00000931322574615478515625	.00000000931322574615478515625	.00000931322574615478515625	.00000000931322574615478515625	.0000186264514923095703125
35	State Tellurium	.000004656612873077392578125	.000000004656612873077392578125	.000004656612873077392578125	.000000004656612873077392578125	.00000931322574615478515625
36	State Vanadium	.0000023283064365386962890625	.0000000023283064365386962890625	.0000023283064365386962890625	.0000000023283064365386962890625	.000004656612873077392578125
37	State Chromium	.00000116415321826934814453125	.00000000116415321826934814453125	.00000116415321826934814453125	.00000000116415321826934814453125	.0000023283064365386962890625
38	State Manganese	.000000582076609134674072265625	.000000000582076609134674072265625	.000000582076609134674072265625	.000000000582076609134674072265625	.00000116415321826934814453125
39	State Nickel	.0000002910383045673370361328125	.0000000002910383045673370361328125	.0000002910383045673370361328125	.0000000002910383045673370361328125	.000000582076609134674072265625
40	State Cobalt	.00000014551915228366851806640625	.00000000014551915228366851806640625	.00000014551915228366851806640625	.00000000014551915228366851806640625	.0000002910383045673370361328125
41	State Barium	.000000072759576141834259033203125	.000000000072759576141834259033203125	.000000072759576141834259033203125	.000000000072759576141834259033203125	.00000014551915228366851806640625
42	State Strontium	.0000000363797880709171295166015625	.0000000000363797880709171295166015625	.0000000363797880709171295166015625	.0000000000363797880709171295166015625	.000000072759576141834259033203125
43	State Calcium	.00000001818989403545856475830078125	.00000000001818989403545856475830078125	.00000001818989403545856475830078125	.00000000001818989403545856475830078125	.0000000363797880709171295166015625
44	State Magnesium	.000000009094947017729282379150390625	.000000000009094947017729282379150390625	.000000009094947017729282379150390625	.000000000009094947017729282379150390625	.00000001818989403545856475830078125
45	State Sodium	.0000000045474735088646411895751953125	.0000000000045474735088646411895751953125	.0000000045474735088646411895751953125	.0000000000045474735088646411895751953125	.000000009094947017729282379150390625
46	State Potassium	.00000000227373675443232059478759765625	.00000000000227373675443232059478759765625	.00000000227373675443232059478759765625	.00000000000227373675443232059478759765625	.0000000045474735088646411895751953125
47	State Ammonium	.000000001136868377216160297393798828125	.000000000001136868377216160297393798828125	.000000001136868377216160297393798828125	.000000000001136868377216160297393798828125	.00000000227373675443232059478759765625
48	State Nitrogen	.0000000005684341886080801486968994140625	.0000000000005684341886080801486968994140625	.0000000005684341886080801486968994140625	.0000000000005684341886080801486968994140625	.000000001136868377216160297393798828125
49	State Oxygen	.00000000028421709430404007434844970703125	.00000000000028421709430404007434844970703125	.00000000028421709430404007434844970703125	.00000000000028421709430404007434844970703125	.0000000005684341886080801486968994140625
50	State Hydrogen	.000000000142108547152020037174224853515625	.000000000000142108547152020037174224853515625	.000000000142108547152020037174224853515625	.000000000000142108547152020037174224853515625	.00000000028421709430404007434844970703125
51	State Fluorine	.0000000000710542735760100185871124267578125	.0000000000000710542735760100185871124267578125	.0000000000710542735760100185871124267578125	.0000000000000710542735760100185871124267578125	.000000000142108547152020037174224853515625
52	State Chlorine	.00000000003552713678800500929355621337890625	.00000000000003552713678800500929355621337890625	.00000000003552713678800500929355621337890625	.00000000000003552713678800500929355621337890625	.0000000000710542735760100185871124267578125
53	State Bromine	.000000000017763568394002504646778106689453125	.000000000000017763568394002504646778106689453125	.000000000017763568394002504646778106689453125	.000000000000017763568394002504646778106689453125	.00000000003552713678800500929355621337890625
54	State Iodine	.0000000000088817841970012523233890533447265625	.0000000000000088817841970012523233890533447265625	.0000000000088817841970012523233890533447265625	.0000000000000088817841970012523233890533447265625	.000000000017763568394002504646778106689453125
55	State Phosphorus	.0000000000044408920985006261616945266723828125	.0000000000000044408920985006261616945266723828125	.0000000000044408920985006261616945266723828125	.0000000000000044408920985006261616945266723828125	.0000000000088817841970012523233890533447265625
56	State Sulfur	.00000000000222044604925031308084726333619140625	.00000000000000222044604925031308084726333619140625	.00000000000222044604925031308084726333619140625	.00000000000000222044604925031308084726333619140625	.0000000000044408920985006261616945266723828125
57	State Silicon	.000000000001110223024625156540423631668095703125	.000000000000001110223024625156540423631668095703125	.000000000001110223024625156540423631668095703125	.000000000000001110223024625156540423631668095703125	.00000000000222044604925031308084726333619140625
58	State Boron	.0000000000005551115123125782702118158340478515625	.0000000000000005551115123125782702118158340478515625	.0000000000005551115123125782702118158340478515625	.0000000000000005551115123125782702118158340478515625	.000000000001110223024625156540423631668095703125
59	State Carbon	.00000000000027755575615628913510590791702392578125	.00000000000000027755575615628913510590791702392578125	.00000000000027755575615628913510590791702392578125	.00000000000000027755575615628913510590791702392578125	.0000000000005551115123125782702118158340478515625
60	State Nitrogen	.000000000000138777878078144567552953958511962890625	.000000000000000138777878078144567552953958511962890625	.000000000000138777878078144567552953958511962890625	.000000000000000138777878078144567552953958511962890625	.00000000000027755575615628913510590791702392578125
61	State Oxygen	.000000000000069388939039072283776476979255981453125	.000000000000000069388939039072283776476979255981453125	.000000000000069388939039072283776476979255981453125	.000000000000000069388939039072283776476979255981453125	.000000000000138777878078144567552953958511962890625
62	State Hydrogen	.0000000000000346944695195361418882384896279907265625	.0000000000000000346944695195361418882384896279907265625	.0000000000000346944695195361418882384896279907265625	.0000000000000000346944695195361418882384896279907265625	.000000000000069388939039072283776476979255981453125
63	State Fluorine	.00000000000001734723475976807094411924481399536328125	.00000000000000001734723475976807094411924481399536328125	.00000000000001734723475976807094411924481399536328125	.00000000000000001734723475976807094411924481399536328125	.0000000000000346944695195361418882384896279907265625
64	State Chlorine	.000000000000008673617379884035472059622406997681640625	.00000000000000008673617379884035472059622406997681640625	.000000000000008673617379884035472059622406997681640625	.00000000000000008673617379884035472059622406997681640625	.00000000000001734723475976807094411924481399536328125
65	State Bromine	.0000000000000043368086899420177360298112034988408203125	.000000000000000043368086899420177360298112034988408203125	.0000000000000043368086899420177360298112034988408203125	.000000000000000043368086899420177360298112034988408203125	.000000000000008673617379884035472059622406997681640625
66	State Iodine	.00000000000000216840434497100886801490560174942041015625	.0000000000000000216840434497100886801490560174942041015625	.00000000000000216840434497100886801490560174942041015625	.0000000000000000216840434497100886801490560174942041015625	.0000000000000043368086899420177360298112034988408203125
67	State Phosphorus	.00000000000000				

Table 3 continued.

Month	Crop and task	Size of task	Output per man-day	Required man-days	Available days	Required number of workers*
December	Nectarines: Pruning	28 acres †	0.25 acre	112	18	7
	Olives: Picking for oil, etc.	59 tons †	0.2 ton	295	18	17
	Peaches (clingstone and freestone):					
	Pruning	548 acres †	0.25 acre	2,192	18	122
	Brush burning	343 acres †	2.5 acres	138	18	8
	Spraying	1,027 acres †	1.25 acres	822	18	46
	Pears: Pruning	212 acres	0.1 acre	2,120	18	118
	Brush burning	106 acres †	2.5 acres	43	18	3
	Prunes: Pruning	105 acres	0.5 acre	210	18	12
	Brush burning	53 acres †	2.5 acres	22	18	2
	Totals			5,954	18	331 man-months

\* On a monthly basis unless otherwise noted.

† Estimated portion of the job done by seasonal workers.

‡ It should be noted that this figure, rather than representing the number of workers required, represents the number of man-months of labor required and is derived by dividing the total number of man-days of labor by the number of days available for work during the month.

§ Hop pruning and stringing estimated to require 6 man-days per acre, half in March and half in April; the training also estimated to require 6 man-days per acre, two-thirds in May and one-third in June.

¶ Fresh weight.

|| Dry yard labor other than cutting estimated as follows:

Apricots: 11 man-hours per fresh ton  
 Figs: 33 man-hours per dry ton.  
 Peaches: 11.5 man-hours per fresh ton  
 Pears: 26.5 man-hours per fresh ton  
 Prunes: by dehydrator, 6 man-hours per fresh ton  
           by sun drying, 8.3 man-hours per fresh ton

\*\* Rate of work for an 8-hour day.





TABLE 4

## Summary of Seasonal Labor Needs by Months

Yuba County

1935

Month	Required man-days of seasonal labor	Available days	Required man-months of seasonal labor
January	5,126	18	285
February	5,944	19	313
March	2,460	21	118
April	2,444	22	112
May	20,374	24	849
June	5,429	25	218
July	9,642	26	371
August	38,189	26	1,500
September	17,469	26	672
October	3,830	24	160
November	7,676	23	334
December	5,954	18	331
Total	124,537	--	5,263





## Notes

Notes on Table 2.-- Data concerning "time of need" as shown in this table break down required seasonal labor into the period in which the work is performed in order to permit a subsequent determination of labor needs by months (table 3). Some operations are performed only to a limited extent with seasonal labor. For instance, only about 80 per cent of the labor in harvesting grain is done by seasonal workers. When a job extends over several different months, the proportionate amount for each month is shown.

The amount of work done each month is based on the cropping system followed during 1935. The allotting of amounts of work is based on findings concerning local farm practices, and required time to "rake" a crop resulting from inquiry of producers, and records of carlot shipments, the latter proving helpful in fixing dates of planting and of subsequent tasks involved in producing certain crops. Proportionate amounts of output harvested each month were determined from data of local practices with respect to harvesting, and from carlot shipments of perishable products. Records of truck shipments were also used when available.

Notes on Table 3.-- Table 3 is the condensed summary of labor needs as worked out for Yuba County as a result of findings pertinent to 1935. The data are presented by months with the tasks which were performed in each month indicated by both crop and task. The size of the job was calculated from the data appearing in table 1 (acreage and production) and table 2 (task, time of performance, and percentage of work pertinent to a given month). The output per man-day was calculated as indicated in the foreword presenting table 3. The number of required man-days is a result of dividing the size of task by output per man-day. The available days for the different tasks involve two variables. The first is the number of days when field work is possible because of favorable weather conditions. The basis for this column was determined from a study of the monthly weather charts of the United States Weather Bureau for the years 1933, 1934, and 1935. These data indicated available days per month as follows (based on a 26-day working month without allowance for holidays):

Month	Available days	Length of work day	Month	Available days	Length of work day
		hours			hours
January	18	9	July	26	10
February	19	9	August	26	10
March	21	10	September	26	10
April	22	10	October	24	10
May	24	10	November	23	9
June	25	10	December	18	9

## Source of data:

Based on precipitation records of the Marysville station of the United States Weather Bureau for the years 1933, 1934, and 1935.

The second factor influencing the number of available days was the size of the job. If the output was only a few cars, then the number of days was limited to the time needed to get out those cars efficiently. If a field operation had to be performed in a period less than the number of available days in the month, then the specific number of days was noted. These restrictions are shown in parentheses. For example, in June picking of cherries was limited to the first 10 days of the month, picking apricots to the last 25 days, etc.



1. The first part of the report deals with the general situation of the country and the position of the various groups.

2. The second part of the report deals with the economic situation and the position of the various groups.

3. The third part of the report deals with the social situation and the position of the various groups.

4. The fourth part of the report deals with the political situation and the position of the various groups.

5. The fifth part of the report deals with the cultural situation and the position of the various groups.

6. The sixth part of the report deals with the religious situation and the position of the various groups.

7. The seventh part of the report deals with the legal situation and the position of the various groups.

8. The eighth part of the report deals with the administrative situation and the position of the various groups.

1. General situation	2. Economic situation	3. Social situation	4. Political situation	5. Cultural situation	6. Religious situation	7. Legal situation	8. Administrative situation
...	...	...	...	...	...	...	...

9. The ninth part of the report deals with the international situation and the position of the various groups.

10. The tenth part of the report deals with the future of the country and the position of the various groups.

11. The eleventh part of the report deals with the conclusion of the report.

12. The twelfth part of the report deals with the appendix.

The totals of table 3 show the total required man-days of needed seasonal labor, the available days for field work during the month, and the necessary number of men (as defined in the opening paragraph of table 3) required on a monthly basis to care for the tasks ordinarily performed by seasonal workers.

In an area such as Yuba County, involving a variety of annual crops, the findings as set forth in this report are bound to fluctuate materially from year to year, because of the market outlook upon what and how much acreage is planted, and when it is planted; because of variable seasonal conditions affecting yields, time of performing operations, and available days; and because of harvesting operations on certain crops being speeded up to supply a good market, or retarded to avoid a poor one, resulting in marked variations in the need for harvest labor.



The totals of table 3 show the total required man-days of needed seasonal labor; the available days for field work during the month, and the necessary number of men (as defined in the opening paragraph of table 3) required on a monthly basis to care for the tasks ordinarily performed by seasonal workers.

In an area such as Yuba County, involving a variety of annual crops, the findings as set forth in this report are bound to fluctuate materially from year to year, because of the market outlook upon what and how much sorghum is planted, and when it is planted; because of variable seasonal conditions affecting yields, time of performing operations, and available days; and because of harvesting operations on certain crops being speeded up to supply a good market, or retarded to avoid a poor one, resulting in marked variations in the need for harvest labor.

